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POLICY RECOMMENDATIONS:

CROP CLINIC

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Alberta Agriculture

Based on recommendations of

The Interim Crop Clinic Advisory
Committee

March 31, 1971

JUN 29 '79

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INTRODUCTION

The Crop Clinic was established in 1969 for the purpose of providing a forum for the discussion of crop problems and for the presentation of recommendations to the Department of Agriculture.

POLICY RECOMMENDATIONS

CROP CLINIC

The Crop Clinic was established in 1969 for the purpose of providing a forum for the discussion of crop problems and for the presentation of recommendations to the Department of Agriculture. Today the Institute has a staff of 10 people and a budget of \$10,000. It is a service to the farming community and to the Department of Agriculture.

Prepared by:

O. G. Bratvold

SITUATION

As has been mentioned, there has been considerable interest in the crop clinic since its establishment in 1969. There have been many requests for information and for recommendations. However, there is a growing need for a more formal organization to handle these requests.

Based on
Recommendations
of

The Interim

Crop Clinic Advisory Committee

The Crop Clinic was established in 1969 for the purpose of providing a forum for the discussion of crop problems and for the presentation of recommendations to the Department of Agriculture. It is a service to the farming community and to the Department of Agriculture.

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INTRODUCTION

The Crop Clinic originated in 1960. Its specific purpose was to provide a diagnostic and identification service in the disciplines of plant pathology, entomology, zoology and botany. The objective was to provide this service to Alberta Department of Agriculture personnel who, in working with agricultural producers, encountered problems for which they lacked the specialized training to resolve. It was a one-man operation, but it was the nucleus of a service on which agriculture was to make ever-increasing demands. Today the 'clinic' has a staff of twelve people and its work has expanded to include some projects in the field of applied or problem oriented research.

SITUATION

As has been indicated, there has been substantial growth in the crop clinic as a facility since its inception in 1960. There has, however, been a greater increase in demands on the clinic, in terms of combined diagnostic and research projects. In 1961, the first year for which a report is available, 781 specimens of all kinds were diagnosed or identified. In 1970, 2,174 specimens were handled, plus 14 research or investigation projects. See appendices A and B. In addition there are other demands being made of the clinic, e.g. Virus-Free Potato project. In total there is, of course, more work that could come within the classification of crop clinic capability than there is capacity for in terms of personnel and equipment.

It must be recognized that the clinic is a limited resource, and probably always will be. This is not intended to be critical of those planners who have developed, or assisted in any way to develop the clinic over the past decade. It is simply recognizing a fiscal fact of life which must be taken into account in considering future plans.

The problem, stated in its simplest terms, is to establish priority and designate work-loads, so as to make the most efficient use of the resource available. Put another way; the limited resource should be utilized on those activities that will render the greatest benefit to agriculture.

PROPOSAL

The problem having been defined, we now address ourselves to the methods by which it might best be resolved. It is our view that members of the clinic, per se, should not be expected to bear the full burden of deciding which activities shall or shall not be undertaken. Those whom the clinic is intended to serve should be consulted.

Therefore, the first step was to set up an *interim* Crop Clinic advisory committee, and charge that committee with the responsibility of making recommendations for the future direction and guidance of the clinic. The *interim* committee was made up of Plant Industry personnel and at time of writing has held three meetings.

Out of these meetings a number of recommendations evolved.

RECOMMENDATIONS

The *interim* committee felt that the *purpose* and *objective* of the clinic should be redefined.

They recommend the following:

CROP CLINIC

Purpose:

To provide laboratory service, to the Alberta Department of Agriculture and other specified organizations, for the purpose of diagnosing and advising on problems related to the disciplines of plant pathology, entomology, zoology, botany and related sciences. To undertake applied research in these disciplines as recommended by the advisory committee. h

Objective:

To provide a professional diagnostic and information service to staff who work directly with the public, thus enabling them to more accurately advise the public in problems relating to these disciplines. The Laboratory, therefore, is a supportive facility and not deemed to be a line function. oh

The committee further recommends:

1. That the name of the facility be: *Plant Industry Laboratory*. oh

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2. That the working title of the Supervisor be changed to:
Laboratory Head.
3. That a permanent advisory committee be established to be advisory to the Director, Plant Industry Division, in matters relating to the clinic. The membership to be as follows:
 - A. 1. Director, Plant Industry Division ? — wipe out.
 2. Laboratory Head (must properly represent his people) (notable heads) -
 3. Head, Crop Protection and Pest Control Branch
 4. Head, Horticulture Branch
 5. Head, Weed Control and Field Services Branch
 6. Extension Division Representative (D.A.) !
 7. Head, Field Crops Branch
 8. Head, Soils Branch
- B. The advisory committee may invite other persons to participate, as deemed necessary.
- C. It is also proposed that the first five named above be a work planning and priorities committee (Item 2 of proposed purpose and objectives).
4. That Purpose and Objective of the advisory committee be defined as follows:
 1. The committee shall be advisory to the Director, Plant Industry Division in matters relating to the Laboratory. ? ok

2. *To review programs and projects and make recommendations for the purpose of establishing needs and priorities, with a view to the most efficient use of human and material resources, in meeting the purpose and objectives of the laboratory.*
3. *To provide liaison and co-ordination between the laboratory and the various Branches of the Plant Industry Division, the Department and other agencies.*
4. *To assess and recommend policy relating to the overall operation of the laboratory facility.*

The *interim* committee reviewed the activities of the clinic with a view to making policy recommendation for immediate implementation.

While the Crop Clinic at the very outset was intended to be a staff function, (see appendix C, also page 48 Annual Report, Department of Agriculture, 1961), it has in fact been a line function, inasmuch as farmers and urban people alike have been submitting specimens direct to the clinic. The result has been an unnecessary overload as indicated by Tables I and II.

TABLE I

Submissions of Insect Problems by
Various Sources - January 1st, 1970 to December 31st, 1970

District Agriculturists' offices	313	
Agricultural Fieldmen	18	
Public Health	5	
Provincial & Federal agencies	46	
City Parks	1	
Individuals by mail	48)	
)	>25%
Individuals direct to laboratory	101)	
<hr/>		
Total	532	

Comment of Entomologist:

"Of the 101 submissions direct to laboratory, 90 were common routine samples that could have been intercepted at the District Agriculturist level. In other words, 1.25 hours x 90 = 112.5 man-hours were diverted to individuals. Of the 48 mailed in direct, 40 could have been handled by the District Agriculturist."*

* Mean time per specimen, all submissions. Note appendix D.

TABLE II

Plant Disease Submissions
January to December inclusive 1970

<u>Sources</u>	<u>Submissions</u>	
1. District Agriculturists' offices	564	
2. Agricultural Fieldmen	40	
3. Provincial & Federal agencies	250	
4. City Parks	17	
5. Individuals (personal submission)	311)	32.2%
6. Individuals (mailed submission)	103)	
	<hr/>	
Actual Specimen Submissions	1,285	
Number Pending Diagnosis	73	
	<hr/>	
Actual Specimens Processed -		
	TOTAL	1,212

The committee, therefore, strongly recommended that steps be taken to bring the operation back to the original concept of a staff function. Consequently a *Specimen Handling Policy* is proposed as follows:

SPECIMEN HANDLING POLICY -

PLANT INDUSTRY LABORATORY

Specimens may be accepted for processing from municipal, provincial and federal agencies, subject to the

approval of the laboratory head or work planning committee.

- A fee of \$5.00 will be charged for each specimen not submitted through the above-mentioned agencies.
- All specimens must be accompanied by a completed history form, according to directions listed, and laboratory examination will not proceed until receipt of same.
- In the case of missing or incomplete history form or insufficient specimen material, one form letter will be sent to the submitting office, and a copy to the owner, requesting additional information and/or, specimen material. If no response, specimens will be discarded after two weeks.

It should be noted that the proposed \$5.00 fee is a deterrent only, and does not represent the total cost of handling specimen. In the case of entomology, the cost per sample is estimated to be about \$24.00, including labour, equipment, chemicals, etc., but not including building, maintenance or field investigation where necessary. Plant pathology specimens are undoubtedly higher because of the high incidence of having to "culture out".

Moreover, the public is not being denied a "free" service. To get it, however, they must go through an agency which, we estimate,

can screen out 25% or more of the routine simple problems.

RESEARCH

It is the philosophy of the Plant Industry Division that diagnostic activities must be given top priority in the activities of the clinic. However, it is recognized that many submissions do not have a known solution and, therefore, require investigation or research.

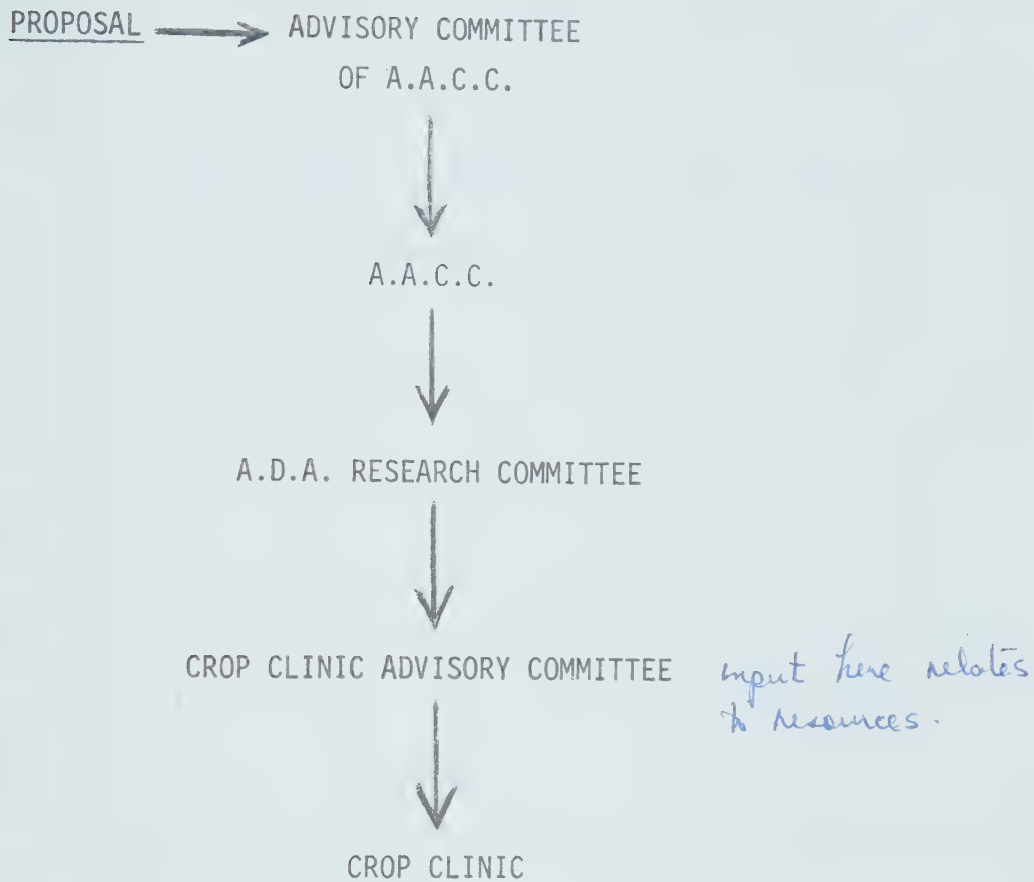
Moreover, it is quite within the realm of possibility, that by reducing the diagnostic work-load, the clinic will have capacity to undertake problem oriented research. We firmly believe that the resource in personnel and facilities should be used to capacity.

The advisory committee recommends that the clinic be recognized as having a research capability and, therefore, should be considered in the overall approach to Alberta Department of Agriculture research.

Chart I is the proposed concept of how research projects should be initiated, screened and ultimately assigned to the clinic.

*major research
only.*

CHART I



At any point in the chart the proposal may be either rejected, or it may be diverted to some other agency.

The overriding principle is that the clinic does not decide what research it shall or shall not undertake. Major projects will be scrutinized by outside agencies before it is undertaken by the clinic.

This does not, of course, include minor investigational work that results from an unresolved diagnostic problem and which falls within the purview of the clinic and its advisory committee.

DISCUSSION

The *interim* committee recognizes the need to plan for future expansion of the clinic in terms of resource personnel. Appendix E shows the organization of staff at the present time. Of a staff of twelve, no less than seven are hired on a part-time or wage basis. It is imperative that a more permanent structure be achieved with as little delay as possible. The philosophy that by not establishing and filling permanent positions, and hiring from wages instead, means fewer civil servants is a rather weak subterfuge. A healthy vital organization is one that is built on a belief in its own future.

Appendix F outlines the anticipated future needs of the clinic in terms of staff.

In the scheduling of work-loads, it must be recognized that laboratory scientists cannot have their time totally pre-structured. In addition to bench time, allowance must be made for the following:

1. Staff training
2. Writing scientific papers
3. Literature research

4. Consultation

5. Emergency projects

CONCLUSION

It is the view of the *interim* committee that the concepts and philosophies that have gone into the making of the policy outline contained herein are in harmony with that of the total Department of Agriculture. The committee believes that the adoption of the proposals will result in a more efficient operation of the clinic and will maximize its contribution to Alberta agriculture.

APPENDIX A

TOTAL NUMBER OF SPECIMENS PROCESSED BY CROP CLINIC AS OF DECEMBER 31st, 1970

	<u>Plant Identification</u>	<u>Insects</u>	<u>Diseases</u>	<u>Misc.</u>	<u>Total</u>
Cereal and Forage	29	20	122	-	171
Special Crops	10	7	236	-	253
Ornamentals	22	2	463	-	487
Shelterbelts	-	199	104	-	303
Vegetables	-	39	108	-	147
Fruits	19	16	193	-	228
Stored Products	-	51	-	-	51
Household	-	54	-	-	54
Public Health	9	25	-	-	34
Veterinary	31	8	-	-	39
Weeds	134	-	-	-	134
Native Plants	104	-	-	-	104
Miscellaneous	45	40	4	-	89
Exotics	-	80	-	-	80
Total 1970	403	541	1,230	-	2,174
Total 1969	428	508	1,158	12	2,106
Total 1968	364	425	1,133	22	1,944

APPENDIX B

RESEARCH AND INVESTIGATION PROJECTS

Mosquitoes

Biology of pest species, location of breeding sites, species identification and design of control programs. ✓

Blackflies

A study aimed at control of blackflies, S. arcticum, in the rivers of northcentral Alberta. River waters were also checked for residue of two pesticides used. ✓

Alfalfa Looper

A recently discovered insect in the rapeseed crops around Three Hills. ✓

Seed Potato Improvement Program

To examine the interrelationship between Green Peach Aphid and potato virus disease. ✓

Maggots in Carrots

A serious infestation of maggots were found in carrots. Attempting to determine if these are a primary infecting agent or a secondary infecting agent. ✓

Insecticide Tests against Mites in Bacteria and Virus Cultures

A mite problem has arisen in stock cultures of Bacteria and fungus causing a contamination problem. ✓

Insecticide Tests Against Greenhouse Insects

This problem is beginning to become serious in southern Alberta. ✓

Potato Scab

Investigation into suitable chemical control. ✓

Seed Treatment

Evaluation of non-mercurials. *in progress*

Fungal Cankers of Woody Ornamentals

To determine causal organisms of several different cankers ✓
on woody ornamentals, etc.

Blackstem of Wild Fescues

To identify and determine whether native wild fescue(s) are *proposed*
sources of inoculum of a similar disease problem in seed stands of
C.R. fescue.

Crown Rot of Elder & Shoot Blight of Lilac

To determine the extent of distribution of the disease on ✓
these two plants in Alberta.

Fireblight

To work out a rapid, accurate, and effective means of identi- ✓
fying this disease.

Carrot Storage Rot

To isolate the causal organisms involved in serious storage
losses of commercial carrot operations.

Browning or Stem-break of Flax

To identify the causal organism of this disease. ✓

APPENDIX C

EXCERPT FROM MEMO, A. M. WILSON, TO ALL DISTRICT AGRICULTURISTS AND AGRICULTURAL FIELDMEN, AUGUST 2nd, 1966

".....

The Clinic is a back-up service to all Field Staff and to Supervisors of the Plant Industry Division. Facilities are not designed to serve farmers or town people direct as an extension media. It must serve all Alberta and this can only be done if specimens are channelled through District Agriculturist offices to the Laboratory.

....."

APPENDIX D

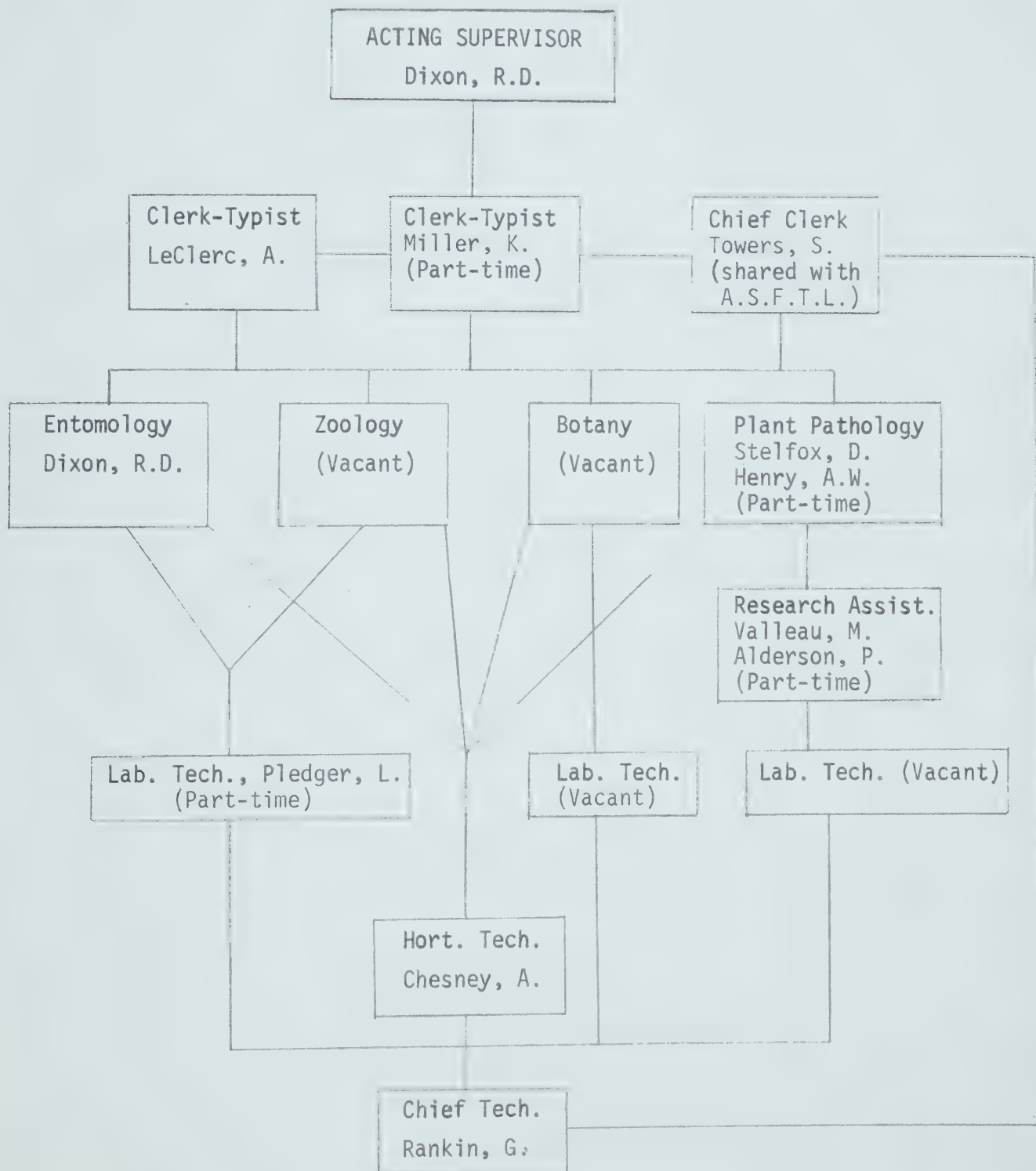
NO. OF INSECT SPECIMENS SUBMITTED AND MEAN TIME REQUIRED TO PROCESS SPECIMENS AS OF DECEMBER 2nd, 1970

<u>Host</u>	<u>Total</u>	<u>Time in Hours</u>
Cereals	14	8.5
Oilseeds	7	3.5
Forage	6	12.0
Sugar Beet	0	0
Vegetables	39	42.0
Ornamental and Shelterbelts	189	161.0
Turf	10	10.5
Small Fruits	16	12.5
Household	48	32.0
Food Materials	39	26.0
Farm-Stored Grain	12	6.0
Public Health	24	38.0
Exotics	80	210.0
Livestock Insects	8	15.0
No Identification	40	26.0
<hr/>		
Total	532	603.0
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Mean Time Per Sample - 1.25 hr.

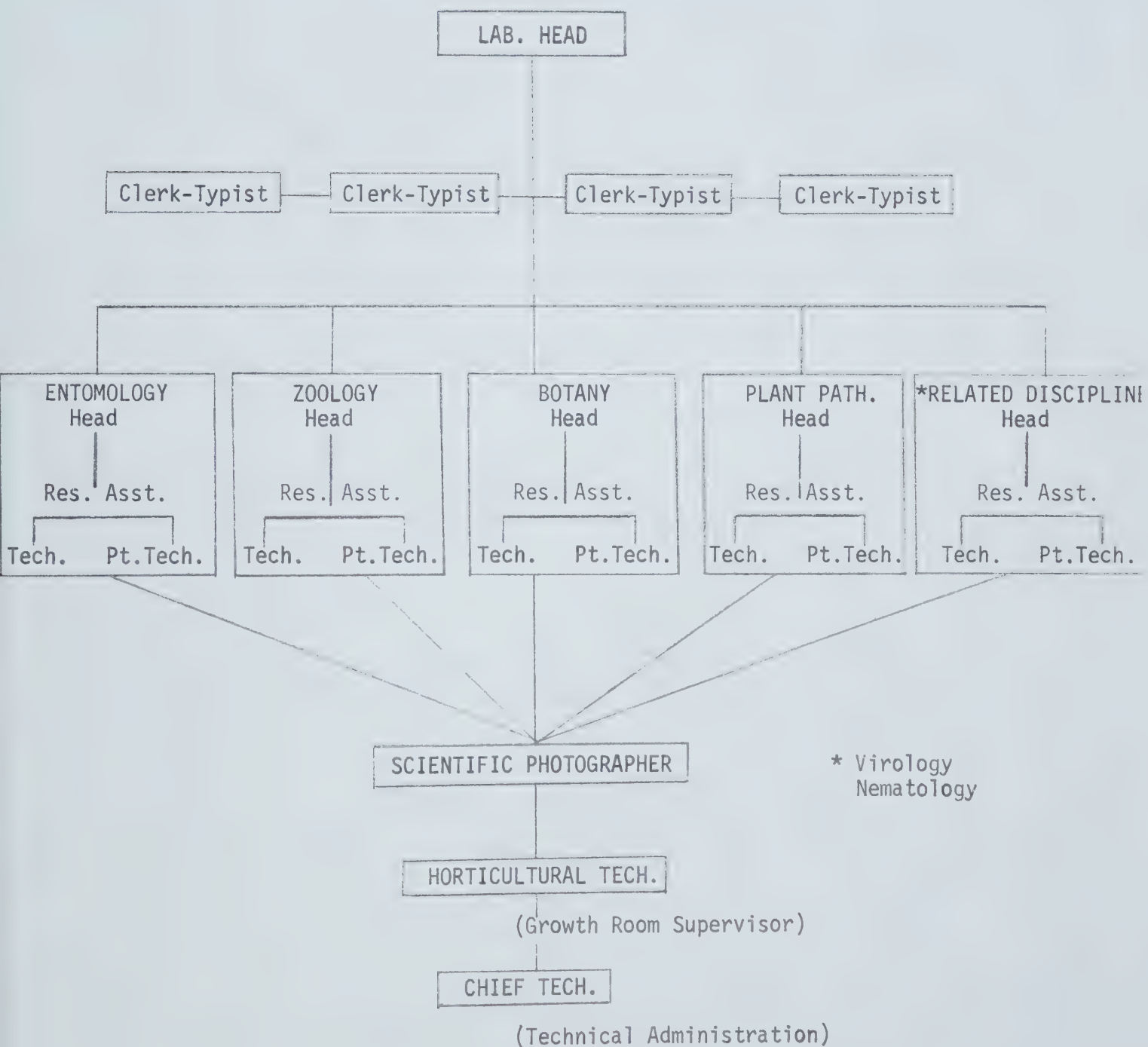
APPENDIX E

PRESENT CROP CLINIC STAFF



APPENDIX F

FUTURE CROP CLINIC STAFF



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